

## ABSTRACT

A method for producing hydrogen by contacting water, steam or gas containing steam with iron or iron oxide, wherein the iron or iron oxide is added with at least one metal of Rh, Ir, Ru, Pd, Pt and Os and at least one metal of Ti, Zr, V, Nb, Cr, Mo, Al, Ga, Mg, Sc, Ni and Cu. The method provides a medium for producing hydrogen which is capable of producing hydrogen at relatively low temperature and at a great generation rate, is free from the decrease of activity, and is resistance to repeated oxidation and reduction, which leads to the decomposition of water and production of hydrogen with good efficiency.